Panasonic
ideas for life

Super Dynamic Weather Resistant HD Dome Network Camera
WV-SW395

HD/1,280 x 960 H.264 Weather Proof Camera featuring *Super Dynamic*

Key Features

- 720p HD images up to 30 fps
- Newly developed 1.3 Megapixel double speed MOS Sensor
- Multiple H.264 (High profile) streams and JPEG streams ensure simultaneous real time monitoring and high resolution recording by "UniPhier®", Panasonic's proprietary System LSI platform.
- Full frame (Up to 30 fps) transmission at 1,280 x 960 image size
- 18x optical zoom with 12x digital zoom enabling 216x zoom.
  36x extra optical zoom under VGA resolution with 12x digital zoom enabling 432x zoom.
- ***Super Dynamic*** and ABS (Adaptive Black Stretch) technologies deliver 128x wider dynamic range compared with conventional cameras.
- ***Face Super Dynamic*** technology ensures clear face image.
- H.264 and MPEG-4 are selectable for system migration.
- High sensitivity with Day/Night function : 0.5 lx (Color), 0.06 lx (B/W) at F1.6 (Wide)
- Adaptive Digital Noise Reduction: 2D-DNR and 3D-DNR integration ensures reduced noise and motion blur in various conditions.
- Superior color reproduction by primary (RGB) color filter
- Electronic sensitivity enhancement: Auto (Up to 16x) / OFF
- Selectable light control modes: Outdoor / Indoor / Fixed electronic shutter
  Outdoor / Indoor: Electronic shutter and ALC lens iris control are automatically controlled depending on the mode and luminance level.
  Fixed electronic shutter: Up to 1/10,000 fixed electronic shutter can be selectable.
- Panning with auto flip function can be performed 0 to 360 degrees.
- Auto tracking: The camera automatically pans and tilts to follow a moving subject and keep it in the center of the image.
- PTZ control can be taken on the user friendly GUI with 16 speeds pan/tilt and new "Drag and Zoom" operation enabling finer control. 256 speeds available for system with WV-CU950 system controller.
- Up to 64 preset positions
- 360 map shot: 8 thumbnail images at 45 deg. intervals make it simple to direct the camera easily by clicking on a thumbnail.
- Industrial grade Pan/Tilt/Zoom mechanism for high reliability
- VMD (Video Motion Detector) with 4 programmable detection areas, 15 steps sensitivity level and 10 steps detection size
- Face detection function detects the position of human face and the information is sent by XML or video stream.
- Meta data for VMD is supplied to work with the WJ-ND400 playback VMD function.
- Privacy Zone can mask up to 8 private areas, such as house windows and entrances/exits.
- Alarm sources including 3 terminal input, VMD and Panasonic alarm command can trigger actions such as SDHC/SD memory recording, FTP image transfer, E-mail notification, Indication on browser, Alarm terminal output, and Panasonic protocol output.
- Full duplex bi-directional audio allows interactive communication between camera site and monitoring site.
- JPEG image compression ratio can be changed by alarm so that higher quality image can be provided.
- Prioritized stream control: One of the video streams can be prioritized when multiple recorders or client PCs are accessing the camera so that the recorder or the client PC can maintain the frame rate.
- SDHC/SD Memory card slot for manual recording (H.264 / JPEG), alarm recording (H.264 / JPEG) and backup upon network failure (JPEG)
- H.264/MPEG-4 max. bit rate/client and Total bit rate control allows flexible network traffic management. Frame rate priority mode controls bit rate and compression ratio to provide the specified frame rate.
- Multi-language GUI and setup menu: English, French, Italian, Spanish, German, Russian (PAL) / English, French (NTSC) * Installation required except for English
- IPv4/IPv6 protocol supported
- Analog Monitor output for easier installation
- Supports SSL, DDNS (viewnetcam, RFC2136)
- Still images (JPEG) can be viewed on mobile phones via Internet.
- ONVIF compliant model
- Supports Power over Ethernet Plus (PoE+) IEEE 802.3at (Type2 compliant, Class 4 device)
  * Does not support IEEE802.3af
- IP66 rated water and dust resistant. Compatible with IEC60529 measurement standard.
- Dehumidification device for use in various weather conditions
- Built-in fan/heater/sun shield for temperature changes of –40 °C ~ +50 °C (–40 °F ~ +122 °F) (24 V AC), –30 °C ~ +50 °C (–22 °F ~ 122 °F) (PoE+)

Standard Accessories

- CD-ROM*1 ..... 1 pc.
- Installation Guide..... 1 pc.

The followings are for installation.

- 8P Alarm Cable ..... 1 pc.
- Connector Kit for 24 V AC ..... 1 pc.
- Front/Rear Sun Shield ..... 1 set
- Front/Rear Sun Shield Fixing Screws ..... 2 pcs. (incl. 1 spare)
- Code Label*2 ..... 1 pc.

*1 The CD-ROM contains the operating instructions (PDFs) and different kinds of tool software programs.
*2 This label may be required for network management. The network administrator shall retain the code label.

Optional Accessory

Wall Mount Bracket
WV-Q122
(PAL model only)

* This catalog is provided for all over the world. Some accessories may not be available in some countries.

- User License Accessory (For MPEG-4)
  BB-HCA5A (NTSC model)
  BB-HCA5CE (PAL model, Korea)*
- User License Accessory (For H.264)
  BB-HCA8A (NTSC model)
  BB-HCA8CE (PAL model, Korea)*

* Required in Korea.

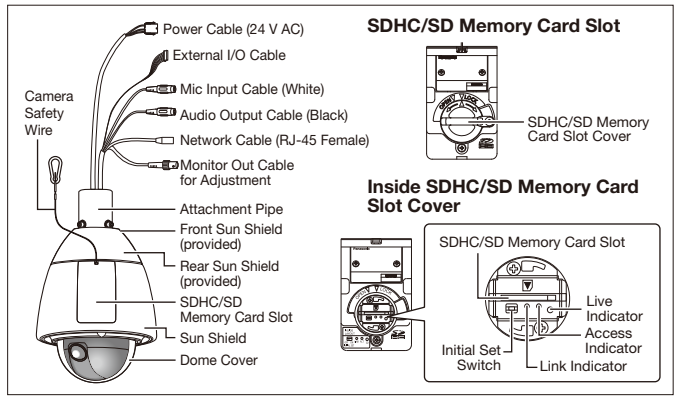
Specifications

TV System			NTSC	PAL
Camera	Image Sensor		1/3 type MOS Sensor	
	Effective Pixels		Approx. 1.3 megapixel	
	Scanning Mode		Progressive scan	
	Scanning Area		4.8 mm (H) x 3.6 mm (V)	
	Minimum Illumination		Color: 0.5 lx, B/W: 0.06 lx at F1.6 (Shutter: 1/30 s, AGC: High), Color: 0.031 lx, B/W: 0.004 lx at F1.6 (Shutter: 16/30 s, AGC: High)	
	White Balance		AWC (2,000 ~ 10,000 K), ATW1 (2,700 ~ 6,000 K), ATW2 (2,000 ~ 6,000 K)	
	Light Control Mode		Indoor scene (50 Hz / 60 Hz) / Outdoor scene / Fix shutter	
	Shutter Speed		Fix shutter: OFF (1/30), 3/100, 3/120, 2/100, 2/120, 1/100, 1/120, 1/250, 1/500, 1/1,000, 1/2,000, 1/4,000, 1/10,000	
	Super Dynamic		ON / OFF	
	Face Super Dynamic		ON / OFF (Only at Super Dynamic: ON)	
	Dynamic Range		52 dB typical (Super Dynamic: ON, Light Control mode: Indoor)	
	Adaptive Black Stretch		ON / OFF	
	AGC		ON (LOW, MID, HIGH) / OFF	
	Electronic Sensitivity UP		OFF, max. 2/30 s, max. 4/30 s, max. 6/30 s, max. 10/30 s, max. 16/30 s	
	Black and White Mode		Mode: AUTO1 / AUTO2 / AUTO3 / ON / OFF, Level: High / Low, with external control	
	Digital Noise Reduction		High / Low	
	Video Motion Detection		4 areas, Sensitivity: 15 steps, Detection size: 10 steps	
	Privacy Zone		Up to 8 zones, Gray / Mosaic	
	Auto Image Stabilizer		ON / OFF	
	Camera Title (OSD)		Up to 20 alphanumeric characters (3 selectable character sizes)	
Lens	Focal Length		4.7 mm ~ 84.6 mm	
	Zoom Ratio		18x / 36x with extra optical zoom (under VGA)	
	Digital (Electronic) Zoom		12x (Max. 432x combined with extra optical zoom under VGA)	
	Angular Field of View		H: 3.2° (Tele) ~ 55.2° (Wide), V: 2.4° (Tele) ~ 42.1° (Wide)	
	Maximum Aperture Ratio		1 : 1.6 (Wide) ~ 4.6 (Tele)	
	Focusing Range		1.5 m ~ ∞	
	Aperture Range		F1.6 ~ 22, Close	
Pan and Tilt	Panning Range		0° ~ 350° (With Pan-Flip: 0°~ 360°)	
	Panning Speed		Manual: approx. 0.5°/s ~ 100°/s, Up to 256 steps (depending on the controller) Preset: up to approx. 300°/s	
	Tilting Range		–30° ~ 90° (upward-level-downward) (With Tilt-Flip: -30°~ 210°) Tilting angle limit: 10° / 5° / 3° / 0° / –3° / –5° / –10° / –15° / –20° *4 / –25° *4 / –30° *4	
	Tilting Speed		Manual: approx.0.5°/s ~ 100°/s, Up to 256 steps (depending on the controller) Preset: up to approx. 100°/s	
	Proportional Pan/Tilt Control		Yes	
	Number of Preset Positions		64	
	Auto Mode		OFF / preset sequence / auto pan / auto track	
	Image Hold		ON / OFF	
	PTZ Position Display		ON / OFF	
	Self Return		10 s / 20 s / 30 s / 1 min / 2 min / 3 min / 5 min / 10 min / 20 min / 30 min / 60 min	
	Pan/tilt Flip *1		ON / OFF	
	Map Shot		360° map shot / preset map shot	
Browser GUI	Camera Control		Pan/Tilt (16 steps), Zoom, Focus, Click centering, Drag zoom, Iris, Preset position call and program, Auto mode	
	Display Mode		Spot, Quad: Image from 16 cameras can be displayed in 4 different Quad screens or 16 split screen (JPEG only). 20 characters camera title available.	
	Camera Title		Up to 20 alphanumeric characters	
	Clock Display		Time: 12H / 24H, Date: 5 formats on the browser, Summer time (Manual/AUTO)	
	Alarm Control		Reset	
	One Shot Capture		A still picture will be displayed on a newly opened window.	
	Audio		Mic (Line) Input: ON / OFF Volume adjustment: Low / Middle / High, Audio Output: ON / OFF Volume adjustment: Low / Middle / High	
	SD Memory Data Download		Still or motion images recorded in the SDHC/SD memory card can be downloaded.	
	GUI/Setup Menu Language		English, French (Installation required for French)	English, French, Italian, Spanish, German, Russian (Installation required except for English)
	System Log		Up to 100 (Internal), Up to 4,000 (SDHC/SD memory when the recording format is set to JPEG.) error logs	
	Supported OS		Microsoft® Windows® 7 Professional 64 bit/32 bit, Microsoft® Windows Vista® Business SP1 32 bit, Microsoft® Windows® XP Professional SP3 The language of the OS must be same as selected GUI language.	
	Supported Browser		Windows® Internet Explorer® 8.0 (Microsoft® Windows® 7 Professional 64 bit/32 bit), Windows® Internet Explorer® 7.0 (Microsoft® Windows Vista® Business SP1 32 bit), Microsoft® Internet Explorer® 6.0 SP3 (Microsoft® Windows® XP Professional SP3)	
Network	Network IF		10Base-T / 100Base-TX, RJ-45 connector	
	Image Resolution *2 *3	Aspect ratio: [4 : 3]	H.264: 1,280 × 960 / 800 × 600 / VGA (640 × 480) / QVGA (320 × 240), up to 30 fps MPEG-4: VGA (640 × 480) / QVGA (320 × 240), up to 30 fps JPEG (MJPEG): 1,280 × 960 / 800 × 600 / VGA (640 × 480) / QVGA (320 × 240), up to 30 fps	
		Aspect ratio: [16 : 9]	H.264: 1,280 × 720 / 640 × 360 / 320 × 180, up to 30 fps JPEG (MJPEG): 1,280 × 720 / 640 × 360 / 320 × 180, up to 30 fps	
	H.264/ MPEG-4 *2	Transmission Mode	Constant bitrate / Framerate priority / Best effort	
		Frame Rate	1 / 3 / 5 / 7.5 / 10 / 15 / 20 / 30 fps	1 / 3 / 5 / 7.5 / 10 / 12 / 15 / 20 / 30 fps
		Bit Rate/Client	64 / 128 / 256 / 384 / 512 / 768 / 1,024 / 1,536 / 2,048 / 3,072 / 4,096 / 8,192* kbps / Unlimited * H.264 mode only	
		Image Quality	LOW / NORMAL / FINE	
		Refresh Interval	0.2 s / 0.25 s / 0.33 s / 0.5 s / 1 s / 2 s / 3 s / 4 s / 5 s	
		Transmission Type	UNICAST / MULTICAST	
	JPEG (MJPEG)	Image Quality	10 steps	
		Transmission Type	PULL / PUSH	
	Audio Compression		G.726 (ADPCM) 32 kbps / 16 kbps, G.711 64 kbps	
	Audio Mode		OFF / Mic (Line) input / Audio output / Interactive (Half duplex) / Interactive (Full duplex)	
	Authentication for Audio		Level 1 only / Level 2 higher / All users	
	Total Bit Rate		64 / 128 / 256 / 384 / 512 / 768 / 1,024 / 2,048 / 4,096 / 8,192 kbps / Unlimited	
	Supported Protocol		IPv6: TCP/IP, UDP/IP, HTTP, HTTPS, RTP, FTP, SMTP, DNS, NTP, SNMP, DHCPv6 IPv4: TCP/IP, UDP/IP, HTTP, HTTPS, RTSP, RTP, RTP/RTCP, FTP, SMTP, DHCP, DNS, DDNS, NTP, SNMP, UPnP	

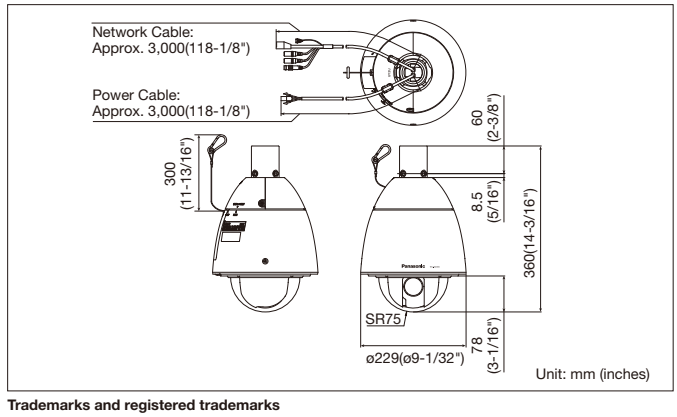
TV System			NTSC	PAL
Network	FTP Client		Alarm image transfer, Periodic image transfer (When the FTP periodic transmission is failed, backup on an optional SDHC/SD memory card is available.)	
	No. of Simultaneous Users		Up to 14 users (Depends on network conditions)	
	SDHC/SD Memory Card (Option)		H.264 recording: Manual REC / Alarm REC (Pre/Post) / Schedule REC JPEG recording: Manual REC / Alarm REC (Post) / Backup upon network failure Compatible SD (SDHC) card: Panasonic 256 MB, 512 MB, 1 GB, 2 GB, 4 GB*, 8 GB*, 16 GB*, 32 GB* model * SDHC card	
	Face Detection		ON / OFF (with XML notification)	
	Cellular Phone Compatibility		JPEG image, panning/tilting/zoom control, AUX control (by access level)	
Alarm	Alarm Source		3x Terminal inputs, VMD, Command alarm	
	Alarm Actions		SD memory recording, E-mail notification, Indication on browser, Camera positioning, Preset position 1 ~ 64, FTP image transfer, Terminal output, Panasonic protocol output, Auto track	
	Alarm Log		With SD memory card: 5,000 logs, Without SD memory card: 1,000 logs	
	Schedule		Alarm/VMD/Access permission, Preset position call, Position refresh, H.264 recording	
Input / Output	Monitor Output (for adjustment)		1.0 V [P-P] / 75 Ω, NTSC composite, BNC	1.0 V [P-P] / 75 Ω, PAL composite, BNC
	Microphone/Line Input		MIC IN and Line IN are selectable. ø3.5 mm monaural mini jack (Applicable microphone: Plug-in power type), Supply voltage: 2.5 V ±0.5 V, Input impedance: approx. 2 kΩ	
	Audio Output		ø3.5 mm stereo mini jack (monaural output) Line level	
	External I/O Terminals		ALARM IN 1 / DAY/NIGHT IN, ALARM IN 2 / ALARM OUT, ALARM IN 3 / AUX OUT (x1 each)	
General	Safety/EMC Standard		UL (UL60065), FCC (Part15 ClassA), C-UL (CAN/CSA C22.2 No.60065), DOC (ICES003 ClassA)	CE (EN60065, EN55022 ClassB, EN55024), GOST (GOST R 51558)
	Power Source/ Consumption		24 V AC (50 Hz / 60 Hz): approx. 43 W Heater ON PoE Plus: approx. 24.0 W (IEEE802.3at Type2 compliant, Class 4 device) Heater ON	
	Ambient Operating Temperature/Humidity		–40 °C ~ +50 °C (–40 °F ~ 122 °F) (24 V AC) *5, –30 °C ~ +50 °C (–22 °F ~ 122 °F) (PoE Plus), 90 % or less (without condensation)	
	Water and Dust Resistance		IP66, IEC60529 measuring standard compatible	
	Dimensions		ø239 mm x 360.5 mm (H) (ø9-7/16" x 14-3/16" (H)), Diameter of the dome: 160 mm (6-5/16")	
	Mass (approx.)		4.6 kg (10.14 lbs.)	

*1 Application software V.1.05 / Driver software V.1.22 or later. The pan/tilt-flip function cannot be activated by clicking live images. When the zoom ratio is adjusted to the "TELE" side, images will be partially hidden even if the pan/tilt-flip function is activated. *2 H.264 and MPEG-4 are alternative. *3 [4 : 3] and [16 : 9] are alternative. *4 Images may partially covered depending on the housing brackets. *5 When used with a continuous power supply (camera internal temperature must be above -10°C, and installation and startup should be done at above -30°C.)

Part Names and Functions



Appearance



Trademarks and registered trademarks

– Microsoft, and Windows are registered trademarks of Microsoft Corporation in the U.S. and other countries.
– UniPhier is a registered trademark of Panasonic Corporation.
– "Super Dynamic", "SDII", "SDIII", "SD5", "SD5Link", "i-PRO" and "i-PRO SmartHD" logos are trademarks or registered trademarks of Panasonic Corporation.
– ONVIF and the ONVIF logo are trademarks of ONVIF Inc.

Important

– Safety Precaution: carefully read the operating instructions and installation manual before using this product.
– Panasonic can not be responsible for network performance and/or other manufacturer products that reside on the network.

• All TV pictures are simulated. • Masses and dimensions are approximate. • Specifications are subject to change without notice. • These products may be subject to export control regulations. • All product pictures are NTSC models.

DISTRIBUTED BY:

Panasonic®

http://panasonic.net/security/
http://www.facebook.com/PanasonicNetworkCamera

Printed in Japan (2A-065EL)